

S/058/60/000/006/015/040
A005/A001

The Mechanical Properties of Solid Solutions of Cadmium, Sodium, Tin, and Antimony in Lead

The existence is noted of an inverse correlation between the absolute magnitude of the derivatives of the parameters mentioned with respect to concentration and solubility.

A.E. Nikercv

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

NIKEROV, A.E.

82813

8/137/60/000/006/005/015
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 6, p. 300,

13853
18.8200

AUTHOR: Nikerov, A.E.

TITLE: On the Mechanical Properties of Solid Solutions of Cadmium, Sodium,
Tin and Antimony in Lead

PERIODICAL: Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertseva, 1959,
Vol. 160, No. 1, pp. 239-252

TEXT: The dependence between the hardness of Pb-Cd, Pb-Sn, Pb-Na, Pb-Sb alloys and the duration of loading r , the pressure P and temperature, is in agreement with the empiric formulae: $d = ar^n$, $d = ap^n \cdot d = a \cdot 10^{kt^0}$. The parameters of the formulae are monotonous functions of the composition. With respect to solubility in solid Pb, the investigated metals range in the following series: Sn, Cd, Na, Sb. The best method for determining the solubility of one metal in another is to determine the bend on the "formula parameters - composition" curve. There is a direct dependence between solubility and the

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S/137/60/000/005/005/015
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On the Mechanical Properties of Solid Solutions of Cadmium, Sodium, Tin and Antimony in Lead

derivatives of the formula parameters with respect to concentration at a concentration equal to zero. Strengthening in plastic deformation depends directly on the binding forces in the crystal, and the latter depend on the alloy hardness changing with varying concentration of the soluble element. There are 24 bibliographical titles.

F.N.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

8/058/60/000/006/013/040
A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 187, # 14232

AUTHOR: Nikerov, A.E.

TITLE: Alloys Having an Extremum of Mechanical Properties Within the Solid Solution Region

PERIODICAL: Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertseva, 1959, Vol. 160, No. 1, pp. 261-272

TEXT: An extremum of mechanical properties occurs within the existence region of solid solutions of Hg in Pb and Cd as well as in the solid solution of Bi in Pb. The property extremum appears in consequence of the superposition of two processes acting in opposite directions: hardening and relaxation. An equation is derived allowing the determination of the distribution of the dissolved atoms within the alloy. The equation analysis shows for what concentrations the occurrence of the extremum on the content-property curve can be expected, and it makes it possible to explain the declivity of the observable maxima. The increase in temperature shifts the maximum to the side of lower concentrations. The increase in deformation rate effects in opposite direction. The intensification of ✓

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Alloys Having an Extremum of Mechanical Properties Within the Solid Solution Region

of the polarization phenomena leads to the equalization in the electron distribution within the alloy crystal lattice and consequently to the decrease of the alloy hardness. The solution of a metal in another does not cause an increase in hardness only in the case that the distortions introduced into the crystal lattice are commensurable with the distortions caused by the thermal motion of the atoms. If the concentrations of the alloy are sufficiently high, the possible influence of the phase bordering the solid solution region must be taken into account.

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Author's summary ✓

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/058/60/000/008/003/009
A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 8, p. 213, # 20349

AUTHOR: Nikorov, A.E.

TITLE: On the Dependence of the Alloy Hardness on the Extension of the Existence Region of Solid Solutions

PERIODICAL: Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertsena, 1959, Vol. 160, No. 1, pp. 273-286

TEXT: The influences are investigated of concentration, duration of applied loading, magnitude of loading, and temperature on the hardness of the alloy systems $\text{Sn} \backslash \text{Hg} \backslash \text{Sn}$ - $\text{Sb} \backslash \text{Cd} \backslash \text{Ag}$ and Cd - Hg. The measurement results are presented in the form of tables. The existence is stated of an inverse dependence of the hardness increase per 1 at.% of the dissolved metal on the extension of the existence region of the corresponding solid solutions.

A.N.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

18.1000
18.8200

80534
S/126/60/009/05/018/025
E021/E335

AUTHORS: Shishokin, V.P. and Nikorov, A.E.

TITLE: The Influence of Temperature and Time of Loading on the
Relation Between Hardness and Composition of Dilute
Solid Solutions

PERIODICAL: Fizika metallov i metallovedeniya, 1960, Vol 9, Nr 5,
pp 768 - 777 (USSR)

ABSTRACT: The hardness of several solid solutions was determined
using different loads (18.5, 28.5, 43.5 and 61.7 kg),
various times of loading (1, 6, 36, 216 and 1 296 min)
and various temperatures with a load of 28.5 kg for 10 min.
The results are shown graphically in Figures 1-12, where
the diameter of the indentation is plotted against concen-
tration of alloying element. Figure 1 shows the effect of
mercury additions to cadmium. There is a decrease in
hardness with increase in concentration of mercury. This
decrease is greater at higher temperatures and lower periods
of loading. Figure 2 shows the hardness of lead-mercury
alloys. In all cases, there is a maximum at 10-15% Hg and

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E021/B335

The Influence of Temperature and Time of Loading on the Relation
Between Hardness and Composition of Dilute Solid Solutions

the sharpness of the maximum increases with increase in load and period of loading. The lead-bismuth system (Figure 3) shows a maximum at 6-15% bismuth at higher temperatures and longer periods of loading. The tin-mercury system (Figure 4) in the limits of solid solubility shows an increase in hardness with increase in mercury concentration. Similar results were obtained for the tin-antimony system (Figure 5), the cadmium-silver system (Figure 6), the lead-cadmium system (Figure 7), the lead-tin system (Figure 8), the lead-antimony system (Figure 9), the lead-sodium system (Figure 10) and the bismuth-zinc system (Figure 11), all tested in the range of solid solubility. The copper-zinc system shows a gradual increase in hardness at 20 and 520°C. The curves of the Meyer hardness, however, for this system show maxima (Curves 1 and 2, Figure 12). Kurnakov (Ref 8) showed that normally the hardness of solid solutions increases with increase in alloying components. The present results have shown that this is not always the case in alloys with a wide range of solid solubility. If the testing tempera-

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Between Hardness and Composition of Dilute Solid Solutions

ture is sufficiently high and the rate of deformation
sufficiently low, conditions are favourable for anomalous
changes with increase in alloying component and a maximum
in the hardness curve is obtained. This is explained by
the strengthening-relaxation hypothesis. Conditions where
relaxation is accelerated result in a nonlinear
relationship between concentration and the number of bonds
between different atoms in the solid solution. There
are 13 figures and 11 Soviet references.

ASSOCIATIONS: Leningradskiy politekhnicheskiy institut im.

M.I. Kalinina (Leningrad Polytechnical Institute im.
M.I. Kalinin)

Leningradskiy pedagogicheskiy institut im. A.I. Gertseva
(Leningrad Pedagogical Institute im. A.I. Gertsen)

SUBMITTED: November 1, 1959

Card 3/3

W

S/081/60/000/010/002,009
A166/A129

AUTHOR: Nikerov, A.E.

TITLE: Alloys with the mechanical properties extreme inside the solid solutions area

PERIODICAL: Referativnyy zhurnal. Khimiya, 1960, no. 10, 51, abstract 37929.
(Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertseva, 1959, v. 160,
no. 1, 261 - 272)

TEXT: A study was made of the effects of concentration, duration of load application, extent of load and temperature on the hardness of Hg in Pb, Hg in Cd and Bi in Pb primary solid solutions. The alloys studied revealed an anomalous dependence of hardness on concentration. An explanation for this phenomenon is given.

A. Nikerov

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[Abstracter's note: Complete translation]

Card 1/1

S/081/60/000/010/003/069
A166/A129

AUTHOR: Nikerov, A.E.

TITLE: The dependence of alloy hardness on the extent of the solid solutions area

PERIODICAL: Referativnyy zhurnal. Khimiya, 1960, no. 10, 52, abstract 37930.
(Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertsen'a, 1959, v. 160,
no. 1, 273 - 286)

TEXT: A study was made of the effects of concentration, duration of load application, extent of load and temperature on the hardness of Sn-Hg, Sn-Sb, Cd-Ag and Cd-Hg system alloys. The results of the measurements are given in table form. An inverse relationship was found between increase in hardness per 1 atomic % of dissolved metal and the extent of the area of corresponding solid solutions.

A. Nikerov



[Abstracter's note: Complete translation]

Card 1/1

SHISHOKIN, V.P.; NIKEROV, A.E.

Using empirical formula parameters connecting hardness with temperature, time length of loading effect, and pressure to determine the solubility boundaries in the solid state. Izv.vys. ucheb.zav.; chern.met. no.3:91-95 '60. (MIHA 13:4)

1. Leningradskiy politekhnicheskiy institut i Leningradskiy pedagogicheskiy institut.
(Metals--Hardness)

RABINOVICH, V.A.; NIKEROV, A.E.; ROTSHTYN, V.P.; SOKOLOV, P.N.

Determining the thermodynamic activities of single ions. Vest. LGU
15 no.4:101-105 '60. (MIRA 13:2)
(Ions) (Activity coefficients)

18.8200 1413 1327 2808

26545

S/076/61/035/008/008/016
B105/B201

AUTHOR: Shishokin, V. P., and Nikorov, A. E. (Leningrad)

TITLE: Application of parameters of empirical formulas correlating hardness to temperature, to duration of load action, and to pressure for determining the limits of solubility in the solid state

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 8, 1961, 1763-1768

TEXT: According to rule, the hardness of metals and alloys depends upon magnitude of load, duration of load action, and temperature. The diameter of the impression as a function of load (Meyer formula) is expressed by:

$P = ad^n$ (1). $H = ae^{\alpha t}$ (2) is valid; (H = hardness). At temperatures, at which a physicochemical transformation takes place, α is variable. The character of the change of the temperature coefficient permits estimating the transformation. For chemically individual substances, the said

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Application of parameters...

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X

coefficient is directly proportional to the expansion coefficient, and inversely proportional to the melting temperature. In binary alloys it grows with an increase of the second component, and passes through a maximum with eutectic alloys. In solid solutions it comes close to the coefficients of the components.

In addition, $H = a\epsilon^n$ (3); a, n = constants depending on test material and experimental conditions. n is inversely proportional to the melting temperature, and directly proportional to the temperature coefficient; it varies in parallel to the latter in constitution diagrams. A study has been made here of the effect of composition upon the parameters (exponent and pre-exponential factor) of empirical equations for primary solid silver solutions in cadmium, mercury solutions in tin, sodium, cadmium, and antimony solutions in lead. Accurately weighed metal portions were melted, cast in round iron molds, and hardened

for 5 - 10 days at about 50°C below the melting temperatures of the alloys. The Brinell hardness number was determined by the apparatus described by the first author (V. P. Shishokin: Zh. Prikl. khimii, 2, 675, 1929).

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$H_B \approx 4P/\pi d^2$ (5) was obtained from $H_B = 2P/\pi D(D - \sqrt{D^2 - d^2})$ (4) by means of a Taylor series and by neglecting the series terms of the power of $\frac{1}{2}$. Using the hardness-versus-impression diameter function under definite conditions, formula $d = a_t \tau^n$ (6) was derived from (3) for $H = bd^m$, and $d = a_t \cdot 10^{n_t t}$ (7) was obtained from (2). $d = a_p P^n P$ (8) was derived from (1). a_t and n_t were determined at room temperature by means of a cone under a load of $P = 28.7$ kg, while a_p and n_p were determined by means of a 10-mm sphere at $\tau = 10$ min and $P = 26.8$ kg. τ rose from 1 to 1296 sec, P from 18.5 to 61.7 kg, and t from 20 to 180°C. Considering that the experimental conditions were constant, (6), (7), and (8) are functions of the compositions (Figs.1-5). While the parameters change monotonically with the composition in the one-phase region, a transition from the one-phase to the two-phase region results in numerous salient points of the curves: this is

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Application of parameters...

especially true for the curves of a_p , n_p , and n_c , which show the limit of solubility of one metal in the other at ordinary temperatures. Results are in good agreement with data available in the literature. In curves describing the temperature dependence of parameters, especially in dynamic tests, a salient point will hardly appear or not at all. A salient point is also observed in hardness-versus-composition curves. The parameters of empirical formulas may be classified into two groups: (I) and (II). Hardness is determined by two processes taking place simultaneously, namely, hardening and relaxing, and having different effects upon either of the above two groups. The pre-exponential factors in (6), (7), and (8) are to be ascribed to (I). They depend on units in which variables and impression diameter are measured, and have definite dimensions. The remaining parameters belong to (II), and, with the exception of α_t , are dimensionless. Hardening and relaxing processes can be clarified by accurate studies of the parameter changes. Since the parameters of (6), (7), and (8) are readily affected characteristics of the physicochemical state of the systems, a study of them as functions of the alloy concentrations

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Application of parameters...

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may be of use in the investigation of physicochemical transformations. A. M. Korol'kov (Ref. 10: Izv. AN SSSR, Otd. tekhn. n., No. 1, 114, 1949), showed that a salient point of the hardness - composition curve did not in all cases take place at the phase boundary; this fact rendered the determination of the solubility limit more difficult. There are 6 figures and 10 references: 7 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: Ref. 8: L. I. Groen, Nature, 174, 836, 1954.

ASSOCIATION: Leningradskiy politekhnicheskiy in-t im. M. I. Kalinina
(Leningrad Polytechnical Institute imeni M. I. Kalinin).
Leningradskiy pedagogicheskiy in-t im. A. I. Gertsen
(Leningrad Pedagogical Institute imeni A. I. Gertsen)

SUBMITTED: November 26, 1959

X

Card 5/11

AERAMOVA, N.A., nauchn. sotr.; BEL'CHENKO, G.V., kand. tekhn. nauk; BERENBLIT, V.V., nauchn.sotr.; VASIL'YEV, V.P., kand.khim. nauk; DOBYCHIN, D.P., doktor khim. nauk; IOFFE, B.V., dokt. khim.nauk; KAMINSKIY, Yu.L., nauchn.sotr.; KARPOVA, I.F., kand. khim. nauk; KOPYLEV, B.A., doktor khim. nauk; LUTUGINA, N.V., kand. khim. nauk; MATEROVA, Ye.A., kand. khim. nauk; MORACHEVSKIY, Al.G., kand. khim. nauk; MORACHEVSKIY, An.G., kand. khim. nauk; NIKEROV, A.E., kand. khim. nauk; PAL'M, V.A., kand. khim. nauk; RABINOVICH, V.A., kand. khim. nauk; SOKOLOV, F.N., kand. khim. nauk; FRIDRIKHSBERG, D.A., kand. khim. nauk; TSYGIR, Ye.N., nauchn. sotr.; SHAGITSULTANOVA, G.A., kand. khim. nauk; SHKODIN, A.M., doktor khim. nauk; YATSIMIRSKIY, K.B.; GRIGOROV, O.N., doktor khim. nauk, red.; ZASLAVSKIY, A.I., kand. khim. nauk, red.; MORACHEVSKIY, Yu.V., prof., red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.; POZIN, M.Ye., doktor tekhn. nauk, red.; PODAY-KOSHITS, B.A., doktor khim. nauk, red.; PROTASOV, A.M., kand. fiz.-mat. nauk, red.; ROMANKOV, F.G., red.

[Handbook for the chemist] Spravochnik khimika, 2. izd., perer. i dop. Moskva, Khimiia. Vol.3. 1964. 1004 p. (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Romankov). 2. Deystvitel'nyy chlen AN Ukr.SSR (for Yatsimirskiy).

NIKEROV, P. S.

"On Certain Problems of Wave Damping with the Aid of Compressed Air." Min Maritime Fleet USSR, Odessa Inst of Engineers of Maritime Fleet, Odessa, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: M-955, 16 Feb 56

SOV/...-58-7-7661

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 46 (USSR)

AUTHOR Nikorov, P.S.

TITLE: On the Theory of Variable-amplitude Waves (K teorii voln s peremennoy amplitudoy)

PERIODICAL: Nauchn. tr. Odess. in-t inzh. morsk. flota, 1957, Nr 13,
pp 197-205

ABSTRACT. A detailed investigation is made of a class of particular solutions to the problem of gravitational waves of infinitely small amplitude on the surface of an infinitely deep liquid; this class of solutions has the form

$$\varphi(x, y, t) = C e^{ky + \ell z} f(t) \cos(\sigma t) \sin(kx - \ell y)$$

If the function $f(t)$ is assumed to be aperiodic, the condition of constancy of the pressure on the free surface is equivalent to the two equations

$$(k^2 - \frac{\sigma^2}{g}) f + \frac{\ell}{g} f' = 0 \quad \text{and} \quad \ell f + \frac{2\sigma}{g} f' = 0$$

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SOV/124-58-7-7661

On the Theory of Variable-amplitude Waves

from which two equations the function $f(t)$ and the interrelationships between the parameters k , σ , and f are determined.

$$I = C \exp \frac{g f t}{2 \sigma} \quad \text{and} \quad f = \frac{2 \sigma}{g} \sqrt{\varepsilon - \varepsilon_0}$$

The author observes that the case of $\varepsilon^2 < kg$ has no physical significance and that $\varepsilon^2 > kg$ is simply the case of ordinary standing waves. $\varepsilon^2 > kg$ is something new, and the author deals with it in detail. A study is made of the shape of the free surface. The article contains many photographic errors.
N N Moiseyev

Liquids--wave characteristics.

Card 2/2

NIKEROV, P.S., kand.tekhn.nauk

Working principle of pneumatic breakwaters. Nauch.trudy OIIMF
no.16:24-29 '58. (MIRA 11:11)
(Breakwaters)

NIKEROV, P.S., kand.tekhn.nauk

Laboratory investigation of superficial hydraulic wave damper.
Rech.transp. 18 no.12:38-40 D '59. (MIR 13:4)
(Waves) (Hydraulic models)

NIKEROV, P.S.

Using the method of squaring in processing the recording of oscillations. Izm.tekh. no.11:31-32 N '60. (MIRA 13:11)
(Oscillations)

NIKEROV, Pavel Stepanovich; KULYGIN, P.A., red.; ANDREEVA, L.S. red.
izd-va; LAVRENOVA, N.B., tekhn. red.

[Hydraulic breakwaters] Gidravlicheskiy volnolom. Moskva, Izd-vo
"Morskoi transport," 1961. 83 p. (MIRA 15:6)
(Breakwaters)

NIKEROV, P.S.

Large-scale model tests of a floating breakwater. Gidrotehnika
no.1:25-30 '61. (MIRA 15:3)
(Breakwaters—Testing)

NIKEROV, P.S.

Role of surface currents in the dissipation of waves by a pneumatic
breakwater. Gidrotehnika no.1:81-87 '61. (MIRA 15:3)
(Breakwaters)

BODNAR-SOLOV'YEV, V.V.; NIKEROV, P.S.

Apparatus for measuring stresses arising in universal joints.
Gidrotekhnika no.1:94-96 '61. (MIRA 15:3)
(Universal joints(Mechanics)--Testing)

NIKEROV, P., dotsent

Air consumption in pneumatic breakwaters. Rect. transp. 2C no.8:
47 Ag '61. (MIRA 14:1C)

1. Odesskiy institut inzhenerov morskogo flota.
(Breakwaters)

3/123/61/000/020/029/035
A004/A101

AUTHOR: Nikerov, P. S.

TITLE: Hydraulic stabilizer

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 20, 1961, 11, abstract
20L47 ("Sudostroyeniye", 1961²⁷, no. 6, 17-18)

TEXT: The principle of action of the hydraulic stabilizer is based on the properties of waves to collapse in the zone of counterflow. The stabilizer is an assembly which produces on the water surface an artificial flow directed from the ship's board outward. The design of the stabilizer is comparatively simple. On the water-mark level or somewhat higher the ship's hull is surrounded by the working pipe (collector) with holes on which horizontal nozzles are placed. The pump installation, located on the deck or in the ship's hold, presses water into the collector which, under pressure, is ejected from the nozzles in a continuous row of horizontal jets. When hitting the sea surface the jets carry away the upper water layers and produce a surface current beyond the ship's board. The waves running towards the ship and getting into the zone of the counterflow rapidly change their elements: their height considerably increases

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A004/A101

Hydraulic stabilizer

while their length decreases. The main advantage of the hydraulic stabilizer consists in the fact that its efficiency does not depend on the running speed and is preserved also while the ship stands. Investigations showed that the power input of the jets can be found according to an expression being presented. For normal operation of the hydraulic stabilizer low-pressure pumps of high capacity are required. The collector should have closely arranged nozzles of a diameter ensuring the passage of large amounts of water. There are 1 figure and 5 references.

N. Alekseyev

[Abstracter's note: Complete translation]

Card 2/2

NIKEROV, P.S.

Determining the consumption of air in a pneumatic breakwater.
Gidrotekhnika no.2:53-58 '62. (MIRA 16:5)
(Compressed air) (Waves, Calming of)

NIKEROV, P.S.

Degree of precision of analyzing recordings of wave vibrations using
quadrature. Gidrotekhnika no.2:95-100 '62. (MIR^a 16:5)
(Waves)

NIKEROV, P.S.

Some tendencies in the development of the port of New York.
Gidrotekhnika no.2:134-135 '62. (MIRA 16:5)
(New York (City)--Harbor)

GUREVICH, D.Ye.; NIKEROV, P.S., dotsent

Hydraulic wave damper. Transp. stroi. 12 no.4:27-29 Ap '62.
(MIRA 15:5)

1. Glavnyy tekhnolog Chernomorgidrostroya (for Gurevich).
2. Odesskiy institut inzhenerov morskogo flota (for Nikerov).
(Waves, Calming of) (Hydraulic machinery)

NIKEROV, P., dotsent; KULYGIN, B.

Twentieth International Congress on Navigation. Mor. flot
22 no.3:40-41 Mr '62. (MIRA 15:2)

1. Kafedra vodnykh putey i portov Odesskogo instituta
inxhenerov morskogo flota (for Nikerov). 2. Nachal'nik
otdela gidrotehnicheskikh sooruzheniy Gosudarstvennogo
proyektno-konstruktorskogo i nauchno-issledovatel'skogo
instituta morskogo transporta (for Kulygin).

(Navigation—Congresses)

(N) L 10424-66
AM5028043

BOOK EXPLOITATION

UR/

24
B+1

Mikorov, Pavel Stepanovich

Pneumatic breakwater (Pnevmaticheskiy volnolom), Moscow, Izd-vo "Transport",
1965. 135 p. illus., biblio. Errata slip inserted. 1,000 copies printed.

TOPIC TAGS: hydraulic engineering, pneumatic device, waterway engineering,
harbour engineering, ocean transportation, inland waterway transportation

PURPOSE AND COVERAGE: This book presents a new type of wave gradient construction, the pneumatic breakwater. A short description of the development in foreign and Soviet studies on the theory of pneumatic breakwater is first given, then a basic introduction of its construction and the principle of its operation. Prospects for the uses of the breakwater in open sea and internal harbours are pointed out. This book is recommended for technical engineers in water transportation and hydrotechnical construction, and it can also be useful for scientists, teachers and students in universities and departments of hydro-technical specialties.

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UDC: 627.235

L 10-24-66

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Ch. IV. Problems of the construction and design of the pneumatic breakwater — 96
Ch. V. Use of pneumatic devices in various fields — 120

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SUB CODE: 00

SUBMITTED: 16 Dec 66

NO REF SUB: 032

OTHER: 025

DC
Card 2/2

Z/056/62/019/002/014/014
I037/I242

AUTHOR: Nikerov, T.

TITLE: Hydraulic damper for ships

PERIODICAL: Přehled technické a hospodářské literatury,
Hutnictví a strojírenství, v.19, no.2, 1962,
136, abstract HS 62-1754 (Sudostroyeniye, v.27,
no.6, 1961, 17-18)

TEXT: Description of the principle of the hydraulic damper
for ships. Experience with the damper. The damping is based on the
properties of the waves to break in the counteracting current region.
The damper is a device producing an artificial current on the water
surface acting from the sides of the ship. At water level or slightly
above, the ship is surrounded by a tubing with openings and horizontal
pipes. A pump placed on deck pumps water which is ejected

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Z/056/62/019/002/014/014
I037/I242

Hydraulic damper for ships

under pressure as a series of horizontal streams from the pipes. Calculation of the stream force based on laboratory tests. According to these tests, the method is technically feasible. Final evaluation and more accurate conclusions, however, can only be obtained from tests with actual dimensions. 1 diagram, 5 references.

[Abstracter's note: Complete translation.]
Card 2/2

NIKEROVA, L. I.

Physics - Study and Teaching

"Pedagogical lectures" in the Leningrad Scientific Research Pedagogical Institute of the Academy of Pedagogical Sciences of the R.S. F. S. R. (Section for methodology in physics.) Fiz. v shkole No. 4, 1952.

Monthly List of Russian Acquisitions Library of Congress November 1952 UNCLASSIFIED.

~~MIKHALOVA, LUDMILA IVANOVNA; BARKOVSKIY, I.V., redaktor; LEONT'YEVA, L.A.,~~
tekhnicheskiy redaktor

[Practical training in mechanical engineering in grade 8; from the
experience of secondary school teacher] Praktikum po mashinovedeniu
v VIII klasse; iz ocyta raboty uchitelia srednei shkoly. Leningerad,
Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, leningr. otde-nie,
1957. 99 p.
(Mechanical engineering--Study and teaching)

NIEEROVA, L.I.

The sewing machine in physics and mechanical engineering courses
in the secondary school. Politekh.obuch. no.7:52-58 J: '57.
(VTRA 10:7)

(Sewing machines)

ZNAMENSKIY, Petr Alekseyevich, prof.; NIKEROVA, Lidiya Ivanovna;
SIDOROV, N.I., red.; TARASOVA, V.V., tekhn.red.

[Mechanics and mechanical engineering in high schools]
Mekhanika i mashinovedenie v srednei shkole. Pod red. P.A.
Znamenskogo. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1959.
(MIRA 12:8)
238 p.

1. Chlen-korrespondent APN RSFSR (for Znamenskiy).
(Technical education)

ZNAMENSKIY, P.A., prof., red.; NIKEROVA, L.I., starshiy nauchnyy sotr.; SHAPOSHNIKOVA, A.A., red.; KOSAREVA, Ye.N., tekhn. red.; DOBRO-KVASHINA, A.M., tekhn. red.

[Teaching physics and the fundamentals of production; from the experience of Leningrad schools] Prepodavanie fiziki i osnov proizvodstva; iz opyta raboty shkol Leningrada. Pod red. P.A.Znamenskogo i L.I.Nikerovoi. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1961. 118 p.

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut vechernikh (smennykh) i zaочnykh srednikh shkol. 2. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Znamenskiy).
(Physics--Study and teaching)
(Leningrad--Education, Cooperative)

NIKEROVA, L.I., red.; KULIKOV, V.N., red.; SHAPOSHNIKOVA, A.A.,
red.

[Experience in teaching physics in evening (staggered)
and correspondence schools] Opyt prepodavaniia fiziki v
vecherney (smennoi) i zaochnoi shkole. Moskva, Izd-vo
APN, 1962. 15² p. (MIRA 18;12)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Lenin-
gradskiy institut vechernikh (smennykh) i zaochnykh sred-
nikh shkol.

NIKEROVA, L.I., red.; LISOVSKIY, V.V., red.; VIKULINA, E.K., red.

[Improving the methods of teaching physics in evening schools] Sovershenstvovanie metodov obucheniia fizike v vechernikh shkolakh. Pod red. L.I.Nikerovoi i V.V. Lisovskogo. Moscow, Izd-vo "Prosveshchenie," 1964. 102 p. (MIRA 17:7)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut vechernikh (smennykh) i zaочnykh srednikh shkol.

L 10681-63
ACCESSION NR: AP3002276

EWT(n)/BDS/RS(w)-2--AFFTC/ASD/ESD-3/SSD-Pab-1
8/0089/63/014/006/0596/0597

AUTHOR: Mikeshichev, V. N.; Sinitsyn, P. V.

75

74

TITLE: Colloquium on construction and application of betatrons, held in
Bucharest, Romania, November 1962

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 596-597

TOPIC-TAGS: clinical use of betatrons, conferences

ABSTRACT: Report on colloquium held in Bucharest in November 1962 on the initiative of the Romanian Academy of Sciences. Thirty scientists from East Germany, Romania, Soviet Union, Poland, Hungary, and Yugoslavia participated. Papers from the first three countries were the most interesting as these countries had greater experience in construction and operation of these accelerators. Academician Kh. Khulubi of the AN RPR opened the colloquium. Papers were presented by Prof. A. A. Vorob'ev (SSSR) on work done in the Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute); Prof. A. Eckart (East Germany) of the Physico-Technical Institute of Jena University; M. Vaksel', A. Brinshek of Lubljana Institute for nuclear physics (Yugoslavia); K. Iliescu and others of the Betatron laboratory, Institute for atomic physics AN RPR; R. V. Sinitsyn and V. N. Mikeshichev (SSSR); E. Burger and V. Stern (East Germany). Among application

Card 1/2

L 10684-63

ACCESSION NR: AF3002276

discussed was the use of betatrons in clinical treatment of malignant growths. It was pointed out that the betatrons produced by the Moscow Elektrozavod are not inferior to those constructed by research institutes or commercial firms.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 12Jul63

ENCL: 00

SUB COMM: 00

NO REF Sov: 000

OTHER: 000

Ja/dm
Card 2/2

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001136920002-7

NIKASHICHIV, V.N.

Second Symposium on effects of ionizing radiations for
Distance radiotherapy, energ. 16 mev, Aug 26-28, 1954.
1954.

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001136920002-7"

NIKESHICHEV, V.N.

~~Necessity of establishing an oncological network in radiotherapy~~
stations (from the viewpoint of the theory of mass service). Med.
rad. 9 no.3:75-78 Mr '64. (MIRA 17:12)

AUTHORS: Nikeshin, B. and Mukhin, I., Mechanics SOV/2-5A-12-12/19

TITLE: Increasing Labor Productivity With the Type P80-2
Perforator (Povysheniye proizvoditel'nosti truda na
perforatorakh P80-2)

PERIODICAL: Vestnik statistiki, 1958, Nr 12, p 63 (USSR)

ABSTRACT: To ease the work of the operators, the authors have initiated
some minor changes in the mechanism of the P80-2 perforator,
which will increase labor productivity.

ASSOCIATION: Statisticheskoye upravleniye Leningrada (the Leningrad Board
of Statistics)

Card 1/1

NIKESHIN, B.S., aspirant

Operational failures of automated water discharge systems with
high-voltage motors. Sbor. nauch. trud. Kem. gor. inst. no.5:
130-132 '64. (MIRA 18:3)

1. Gorno-elektromekhanicheskiy fakul'tet Kemerovskogo gornogo
instituta.

NIKETIC, Boško, RFD, dr.

Cooperation between general practitioner and neuropsychiatrist.
Med. glasn. 8 no.11-12:402-404 Nov-Dec 54.

(PSYCHIATRY

psychiatrist-GP cooperation)

(GENERAL PRACTICE

psychiatrist-GP cooperation)

NIKETIC, B.

On the indications for the interruption of pregnancy in mental patients. Neuropsihijatrija 7 no.1-2:1-10 '59.

1. Iz klinike za zivcane i dusevne bolesti Medicinskog Fakulteta
u Skoplju, direktor: prof. dr. B. Niketic.
(MENTAL DISORDERS in pregn.)
(ABORTION THERAPEUTIC)

NIKETIC, Bosko, prof., dr. (Skopje)

Medico-legal aspects relating to mental patients. Med. glasm. 15
no.2/2a:48-50 F '61.

1. Clan Uredivackog odbora, "Medicinski glasnik".
(MENTAL DISORDERS jurisprudence)

NIKETIC, Bosko, prof., dr. (Skopje)

How to organize daily, weekly and annual rest? Med. glasn. 15
no.2/2a:89-91 F '61.

1. Clan Uredivackog odbora, "Medicinski glasnik".

(REST)

NIKETIC, G.

Wild pomegranates as an industrial raw material. p. 1265.
Vol. 9, No. 8, 1954. TEHNIKA. Beograd, Yugoslavia.

SOURCE: East European Accessions List, (EEAL) Library
of Congress, Vol. 5, No. 8, August, 1956.

YUGOSLAVI./Chemical Technology. Chemical Products and Their
Application. Food Industry.

H-28

Abs Jour: Ref Zhur-Khi..., No 2, 1959, 6354.

Author : Stevic, Bogoje; Miletic, Gordana.

Inst : Belgrade University.

Title : Preservation of Blackberry Juice with Formic Acid.

Org. pub. Zb. radova Pojednivrednog fak. Univerziteta Beogradu, 1957, 5,
No 1, 25-40.

Abstract: It is shown that blackberry juice preserved with formic acid (I) of the concentration of 0.25 - 0.30% starts to ferment in consequence of the development of the yeasts *Saccharomyces* spp. and *Schizosaccharomyces pombe* in it; the latter yeast can develop, if the concentration of I is 0.45%. The Yugoslav standard allows a content of not more than 0.25% of I in

Card : 1/2

129

YUGOSLAVIA/Chemical Technology - Chemical Products and Their
Applications - Food Industry.

H.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 37872

Author : Niketic, G., Gugusevic, M.

Inst Title : -
Title : A Study of Chemical Composition and of Possibilities of
Industrial Uses of Wild Pomegranates.

Orig Pub : Tehnika, 1957, 12, No 1, Prehranbena Ind., 11, No 11,
6-10

Abstract : Domestic species of wild growing pomegranates, grown in
two different regions of the country, were tested in or-
der to determine the potentialities of their commercial
use as raw materials for the fruit-vegetables industry.
Average fruit weight, depending on the growing region,
varies from 100-80 grams. The seed content is inversely
proportional to the fruit size and is correspondingly
45.4 and 59.0%. Skin and rind content is 54.6 and 40%,

Card 1/2

37

NIKETIC, MILUTIN

Radovi u voćnjaku i vinogradu zimi i u rano proleće; s pogledom na preduzetu akciju. Beograd, 1947. 21 p. (Kolarcev narodni univenzitet. Knjinzica za narodno prosvecivanje, 30) (Work in orchards and vineyards in winter and in early spring; in connection with the planned drive) Yugoslavia

SOURCE: East European Accessions List (EEAL), Library of Congress,
Vol. 4, No. 12, December 1955.

NIKETIC, (M. J.)
The Review of Applied
Bacteriology May 1954.

①
NIKETIC (M. J.). Праблем шарке Шљиве у ФНРЈ са војарског гледишта.
[The problem of the Plum pox disease in the F.P.R.Y. from the orchard point
of view.]—Зашт. Биља [Plant Prot., Beograd], 1952, 11, pp. 69-72, 1952.
This paper discusses the plum pox disease [cherry mottle leaf virus: see preceding
and following abstracts] situation in orchards in various parts of Yugoslavia and the
best means of securing the elimination of diseased trees.

VIVETIC, V.

"Problem of prune production." *SOCIALISTIČKA RUDARSTVENA*, Vol. 4, no. 1,
Jan. 1953, Beograd, Yugoslavia

SC: Monthly List of East European Acquisitions Vol. 2, #1, Library of Congress
August, 1953 Unclassified

NIKETIC, M.

Reorganization of our prune culture and alcoholiam. p. 20.
POLJOPRIVREDA. (Drustvo poljoprivrednih inzenjera i teh-
nicara NR Srbije) Beograd. Vol. 4, no. 1, Jan. 1956.

SOURCE: East European Accessions List, (EEAL),
Library of Congress Vol. 5, no. 11, Nov. 1956.

YUGOSLAVIA / Cultivated Plants. Fruit Trees. Small
Fruit Plants. Nut Trees. Tea.

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25042

Author : Niketih, M.

Inst : Not given

Title : Concerning Apples of the Jonathan Variety

Orig Pub : Pol'oprivreda, 1957, 5, No 5, 45-54

Abstract : Under Yugoslavian conditions, at a considerable yield and good quality of fruits, Jonathan has very small fruits and is very sensitive to black rot of the fruits, caused by Physalospora cydonia, which yields with difficulty to treatment, as a consequence of which many fruits fall off prematurely.
-- Ye. A. Parshina

Card 1/1

H-28

YUGOSLAVIA / Chemical Technology. Food Industry

Abs Jour : Ref. Zhur-Khimiya, No 12, 1958, 41356

Author : Tarnevich, Niketich,

Inst : Not given

Title : Chemical composition and technological investigation of
the fruits of Arbutus unedo (strawberry tree).

Orig Pub : Technika, 1957, 12, No 8. Prehzanbena ind., 11, No 8,
122-125.

Abstract : A study was made of the chemical composition and tech-
nological properties of the fruits of a wild strawberry
tree growing widespread in coastal Yugoslavia. An average
fruit weight is 4.6g, seed content 2.5-3%. The chemical
composition of the fruit (in %), moisture 68.5; dry matter
31.5; ash 0.75; acids 0.65; invert sugar 14.1-14.9; fructose

Card 1/2

29

NIKETIC, MILUTIN J.

Sortno voce; kajsić.

Beograd, Yugoslavia. 1958. 219 p.
Zadržna knjiga

Monthly List of East European Accession (EEAI) LC, Vol. 8, no. 6
June 1959
Uncl.

TASOVAC, Borivoje; CALIC,Nada; DUKIC, Dragica; NIKEZIC, Marija; ROLOVIC,
Milana.

The Missler-Fanconi syndrome. Srpski arh. celok. lek 91
no.10:931-938 0'63.

1.Pedijatrijska klinika Medicinskog fakulteta Univerziteta
u Beogradu. Upravnik: prof.dr. Borivoje Tasovac.

5

JOKANOVIC, Rosanda; KRSTIC, Klementije; NIKEZIC, Marija.

Neurofibromatosis with scoliosis and growth retardation in a
12-year-old girl. Srpski arh. celok. lek. 91 no.10:987-992
0-63.

1. Pedijatrijska klinika Medicinskog fakulteta Univerziteta
u Beogradu (upravnik: prof. dr. Borivoje Tasovac) i Decja
hirurska klinika Medicinskog fakulteta Univerziteta u Beogradu
(v.d.upravnika: doc. dr. Ilija Stojimirovic).

5

JOKANOVIC, R., dr; NIKEZIC, Marija, dr

Treatment of diabetic coma in children. Med. glas. 16 no.2:75-79
F '62.

1. Pedijatrijska klinika Medicinskog fakulteta u Beogradu (Upravnik:
prof. dr B. Tasovac)

(DIABETIC COMA in inf & child)

SAVEL'YEV, I.A.; NIKHMIN, S.Z.

Moscow Furniture Factory No.5 struggles to achieve technological
progress. Der.prom. 10 no.9:18-20 S '61. (MIRA 14:10)
(Moscow—Furniture industry)

SOKOLOV, S.N.; NIKHAMILA, G.Ya.

Laboratory setup for determining the heat capacity of a gas at constant pressure (C_p) using the constant flow method. Izv. vys. ucheb. zav.; fiz. no. 5:179-180 '63.

(MIRA 16:12)

1. Moskovskiy aviationsionnyy institut imeni S.Ordzhonikidze.

NIKHAMINA, Ye.A.

~~First~~ observations on treating cancer of the bladder with radioactive cobalt. Urologia 23 no.3:58-60 My-Je '58 (MIRA 11:6)

1. Iz urologicheskogo otdeleniya (zav. - prof. L.I. Dunayevskiy)
6-y Moskovskoy gorodskoy klinicheskoy bol'nitsy i iz Onkologicheskoy
bol'nitsy (glavnnyy onkolog prof. F.M. Lampert).

(BLADDER, neoplasms

radiocobalt (Rus))

(COBALT, radioactive
ther. of bladder cancer (Rus))

LIPMANOVICH, A.S., kand.med.nauk; NIKHAMIN, A.B.

Some problems in the course of neurosyphilis. Sbor.nauch.-prak.
rab.Poliklin.im.F.E.Dzerzh. no.2:112-117 '61. (MIRA 16:4)
(NERVOUS SYSTEM—SYPHILIS)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001136920002-7

NIKHANIKIN SG

NIKHANIKIN, I.V.

2000 1000 1000
(MERA 1 1 1)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001136920002-7"

GURVICH, Yu.V.; KAPLAN, D.A.; KATSNEL'SON, G.N.; NIKHANIKIN, E.A.

Effect of basic parameters on the production capacity of a slitter.
Bumagodel.mash. no.9:155-172 '61. (MIRA 15:1)
(Papermaking machinery)

NIKHAMKIN, E.A.; EYDLIN, I.Ya.; KAPLAN, D.A.

Study of the basic factors determining the closeness of rewinding
on a winder. Bumagodel.mash. no.9:173-183 '61. (MIRA 15:1)
(Papermaking machinery)

KURCHENKO, A.I., inzh.; NIKHAMKIN, E.A., inzh.; KAGAN, V.K., inzh.

A standarized automatic sheet paper cutter is needed.
Bum. prom. 36 no.8:24 Ag '61 (MIRA 14:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut b...
agodelatel'nogo mashinostroyeniya.
(Papermaking machinery)

APT, M.Ya., mayor meditsinskoy sluzhby; NIKHAISKIN, Z.I., kapitan meditsinskoy
sluzhby

Preventing pressure injuries of the lungs while working with the
KIP-5 device. Voen.-med. zhur. no.3:36-38 Mr '56. (MLRA 9:9)
(LUNGS--WOUNDS AND INJURIES)

Tetrahydro-*o*-1-(and 2)-naphthoic acids and their derivatives. S. I. Sergievskaya and E. G. Nikhamkina. (All Union Chem. Pharm. Inst., Moscow). *J. Russ. Chem. (U.S.S.R.)* 15, 940 (1945). *o*-1-Aminotetralin (45 g.), 75 cc. concd. HCl, and 200 cc. water were mixed and treated with sufficient water to dissolve the HCl salt; diazotization by 22.5 g. NaNO₂ in 300 cc. water at -5°, followed by addn. to 50 g. NaCN in 300 cc. water, 80 cc. 10% NH₄OH, and 33 g. CuCl, stirring for 2-3 hrs., and steam distn. gave 3,6,7,8-tetrahydro-1-naphthoic acid (35.7%), b.p. 130-1°, b.p. 160-7°. Heating 15.7 g. of above with 19.5 g. NaOH, 75 cc. ROH, and 5 cc. water at reflux gave 13 g. of the corresponding acid (I), m. 139-40° (after crystn., m. 160-1°; solvent not given) and 0.5 g. amide (no m.p.); the hydrolysis may be conducted in a sealed tube at 140° for 8 hrs., using concd. HCl, although the yield is lowered (ca. 50%). The same acid was obtained after alc. KOH hydrolysis of the hydrogenation product of *o*-1-naphthoate. I (8 g.), 17 cc. alc. ROH, and 1.8 cc. concd. H₂SO₄, heated 6 hrs., yielded the *Ester*, b.p. 129-9°; hydrogenation of *o*-1-naphthoate in ROH, using Raney

Ni at 130° and 50 atm., gave the same ester, b.p. 165-70°. Chloride of I, obtained by heating 12 g. I with 100 g. SOCl₂, b.p. 122-3° (from ROH). The chloride (1.8 g.) in dry benzene and 2 g. Bu₃NCH₂CH₂OH were refluxed for 2 hrs., and after the usual treatment, treated with Bu₃O-HCl to give 2-diethylaminoethyl 5,6,7,8-tetrahydro-1-naphthoate-HCl, m. 161-2° (from benzene). Similar procedures were used in the prep of 3,6,7,8-tetrahydro-1-naphthoate (from *o*-2-aminotetralin), b.p. 103-4° (36%), acid, m. 143° (from ROH) (90%). *Ester*, b.p. 133.5°, b.p. 147°; *chloride*, b.p. 115-10°; *amide*, m. 140-1° (from ROH); 2-diethylaminoethyl ester-HCl, m. 162-3° (from benzene). The alkylamino esters are weak anesthetics.

G. M. Koslapoff

ABSTRACT METALLURGICAL LITERATURE CLASSIFICATION

SEARCHED

SEARCHED

10

ALKYLATION

Tetrahydro-*ar-1-and 2-naphthalene esters and their derivatives.* S. I. Sergievskaya and Yu. G. Nikhamkina (All Union Chem. Pharm. Inst., Moscow), J. Gen. Chem. (U.S.S.R.) 19, 1884-85 (1939) 10(11) (01 cc.), 3.8 g. KOH, and 2.0 cc. water were added with stirring until 3 g. wt. gain was reached. The soln. was treated with 6 g. tetrahydro-*ar-1-naphthyl chloride* in 20 cc. benzene, stirred for 8 min., filtered, and evapd. in vacuo to give crude *K*-tetrahydro-*ar-1-naphthalene* as a yellow oil (0.8 g.). which, treated with 10% HCl, gave the *esteracid* as a yellow, rather unstable oil (1.1 g.) in 100 cc. EtOH was acidified with 1% HCl to Congo red and was treated with 10% FeCl₃ dropwise until pptn. began; the filtrate was again treated with FeCl₃; total yield of crude *disulfide* of tetrahydro-*ar-1-naphthalene acid* was 1 g.; recryst. from EtOH gave 0.5 g. pure product, m. 111-12°. K salt of 1 (10.3 g.) in 200 cc. EtOH and 19 g. EtI was heated to 60-65° for 4 hrs. to give 42.4% *Ester*, b.p. 143-3°; similarly, the *Pr ester* was prep'd. using PrI, b.p. 175-0°; the use of Cl-CH₂CH₂I/I₂ gave the *2-chloroethyl ester*, b.p. 184-5°, while chlorobromopropane gave the *3-chloropropyl ester*, b.p. 122-3°. The latter esters gave, on treatment with R₃NH in the presence of KI, at steam-bath temp.: *2-diethylaminoethyl ester-HCl*, m. 134-5° (addn. of alc. HCl to the Et₂O est.) and *1-diethylaminopropyl ester-HCl*, m. 113-14° (from Et₂O-EtOH). Use of the same procedures starting with tetrahydro-*ar-2-naphthyl chloride*, gave 93% *tetrahydro-*ar-2-naphthalene acid**, yellow oil; *disulfide*, m. 120-1° (from EtOH); *Ester* (48.3%), b.p. 184-6°; *2-chloroethyl ester*, b.p. 184-5°; *3-chloropropyl ester*, b.p. 197-8°; *2-diethylaminomethyl ester-HCl*, m. 107-8° (from Et₂O-EtOH); *3-diethylaminopropyl ester-HCl*, m. 117-18° (from EtOH-Et₂O). The alkanimo esters are not effective anaesthetics.

G. M. Kosolapoff

NIKHAMKINA, Ye.G. [Nikhamkina, H.I.]

Synthesis of bromotriphenylethylene. Nauk. zap. ChDPI 8:89-92
'56. (MIRA 11:2)
(Ethylene) (Chemistry, Organic--Synthesis)

NIKHAMKINA, N.O. [Nikhamkina, N.H.], dots.; GOLOVKO, N.P. [Holovko, N.P.], student; LEVCHENKO, R.Ye. [Levchenko, R.II.], student; KOVAL'SKAYA, L.I. [Koval's'ka, L.I.], studentka; PRIZ, N.S. [Pryz, N.S.], student; SUKOVA, R.I., studentka.

Condensation of phenol, α -naphthol, and β -naphthol with formaldehyde. Nauk. zap. ChDPI 11:345-348 '57. (MIRA 11:5)
(Phenol condensation products) (Formaldehyde)

ACCESSION NR: AP4002283

S/0139/63/000/005/0179/0180

AUTHORS: Sokolov, S. N.; Nikhamina, G. Ya.

TITLE: Laboratory apparatus for determination of specific heat of gases at constant pressure (C_p) by a continuous flow method

SOURCE: IVUZ. Fizika, no. 5, 1963, 179-180

TOPIC TAGS: specific heat of air, air at constant pressure, continuous flow method, specific heat of gas, specific heat isobaric measurement, adiabatic flow calorimeter, calorimetry, thermocouple pyrometer, constant pressure specific heat

ABSTRACT: A laboratory apparatus using a continuous flow method for determination of the specific heat of air at constant pressure (c_p) is described. The basic features are shown in Fig. 1 on the Enclosure. An air blower (1) and a 10-liter cylinder (2) to smooth out pressure variations supply a steady flow of air at a constant pressure p to the calorimeter (3). The volume V of air passing through the calorimeter in a time τ is measured by a gas counter (5). An electric heater (4) heats the gas, causing a temperature difference Δt to exist between the entrance

Card 1A

ACCESSION NR: AP4002283

and exit of the calorimeter. This temperature difference is determined by copper-constantan thermocouples (9) and (10), the emf of which is measured by a potentiometer (11). Tables are available for determining Δt from the emf. The current I and voltage V supplied to the heater are measured by the ammeter (6) and voltmeter (7) respectively and can be varied by the rheostat (8). To reduce heat loss, the calorimeter is enclosed by a vacuum Dewar jacket. From the definition of specific heat and using the equation of state of an ideal gas,

$$c_p = \frac{0.244U - RT}{pV\Delta t \mu}$$

where R is the universal gas constant. μ is the molecular weight of air and T is the average absolute temperature of the gas in the calorimeter. Here T is room temperature plus $\frac{1}{2}\Delta t$. Good results over the course of two years have been obtained with this apparatus by students. Orig. art. has: 9 equations and 2 diagrams.

ASSOCIATION: Moskovskiy aviatsionniy institut imeni S. Ordzhonikidze (Moscow Aeronautical Institute)

SUBMITTED: 13Aug62

DATE ACQ: 02Dec63

ENCL: 01

Card 2/12

L 21184-66 EIW(m)/EPF(n)-2/ENG(m)/T/EWP(t)
ACC NR: AT6039945

IJP(c) DS/JD/JG/GS

SOURCE CODE: UR/0000/65/000/000/0312/0313

32
B+1

AUTHOR: Korshunov, B. G.; Nikhamkin, A. A.

ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy
institut tonkoy khimicheskoy tekhnologii)

TITLE: Preparation of fused chlorides containing rare earth elements

SOURCE: AM SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v
oblasti khimii i tekhnologii mineral'nykh soley i oksidov (Studies in the field of
chemistry and technology of mineral salts and oxides). Moscow, Izd-vo Nauka, 1965,
512-313

TOPIC TAGS: rare earth, rare earth compound, rare earth chloride, double chloride
hydrate, dehydration, fused salt electrolyte

ABSTRACT: A process has been developed for the direct preparation of the fused
chlorides K_3MCl_6 where M is a rare earth element, for the electrochemical winning of
individual rare earth elements. Prior art included an illogical and technically
difficult step—preparation of individual anhydrous rare earth element chlorides.
The newly developed process consisted of dehydrating double chloride $3KCl \cdot MCl_3 \cdot nH_2O$
which was obtained by dissolving a rare earth or rare earth hydroxide in HCl, and
adding KCl in the amount required to form K_3MCl_6 . Dehydrated chloride was melted
under conditions excluding oxygen access. The fused salt contained 52.5–55.5 wt%

Card 1/2

L 21184-66

ACC NR: AT6009945

of the rare earth element chloride and, in most cases, no oxychlorides or oxides of the rare earth elements. Basically the same process may be used for regeneration of the spent electrolyte which contains only a small percentage of the rare earth element chloride.

[JK]

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NIKHARADZE, NI

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21/49T104

USSR/Mining Methods
Mining Equipment

Oct 48

"Metal Propping of Workings at Shaft No 31.
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"Mehk Trud i Tyazh Rabot" No 10

Describes procedure in detail, with three diagrams.
System was introduced in Apr 1947. Production
of steel props should be increased and weight
reduced.

21/49T104

L 10658-66 EWT(1) IJP(c) AT

ACC NR: AP5028308

44, 55

SOURCE CODE: UR/0057/65/035/011/1960/1971

44, 55

AUTHOR: Mikhaylovskiy, A.B.; Pashitskiy, E.A.

ORG: none

21, 000, 55 21, 44, 55
TITLE: On the theory of the stability of an ion beam injected transversely to a magnetic field into a plasma

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60
B

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 11, 1965, 1960-1971

TOPIC TAGS: plasma instability, plasma beam interaction, magnetic trap, magnetic mirror, ion beam, plasma injection, plasma magnetic field

ABSTRACT: The authors discuss the stability of a nearly monoenergetic ion beam injected transversely to the magnetic field into a magnetic trap containing a plasma with a Maxwell distribution of electron and ion velocities. The discussion is applicable to the case of a trap in which ions are continuously injected, because the captured ions quickly reach a Maxwell-like velocity distribution owing to the strong instabilities that develop. The dispersion equation is derived for a monoenergetic beam and a uniform magnetic field, and the roots are derived and discussed for frequencies near harmonics of the ion Larmor frequency and for frequencies in the continuous spectrum far above the ion Larmor frequency but below the electron Larmor frequency. Oscillations near the ion Larmor frequency are found to be unstable even for very low beam densities, and even when longitudinal ion velocities and cyclotron damping are taken into account. The high frequency oscillations are stable for

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sufficiently low beam density (or sufficiently high plasma density). The effect of the longitudinal inhomogeneity of the magnetic field is discussed, the frequencies of the oscillations being found by equating to an integral multiple of ω the integral along a line of force between the reflection points of the longitudinal component of the wave vector. When longitudinal ion velocities and cyclotron damping are taken into account, the longitudinal inhomogeneity of the magnetic field is found to increase the critical beam density above which instability occurs. The effect of a distribution of beam ion velocities (energy inhomogeneity) is also discussed, and it is shown that this, too, tends to stabilize the system. It is concluded that injection into a magnetic trap of a monoenergetic ion beam transversely to the magnetic field can excite oscillations over a wide range of frequency and wavelength, and these can give rise to large anomalous turbulent diffusion. Means exist, however, for partially stabilizing some of these oscillations. In particular, the long wavelength ion cyclotron oscillations are stabilized for sufficiently low beam density by a low plasma ion temperature, and the high frequency oscillations in the continuous spectrum are stabilized by a distribution of beam ion velocities, i.e., by the use of a non-monoenergetic beam. A curved magnetic field geometry (a magnetic mirror system or a corrugated field) reduces the increment of the unstable oscillations. The authors thank V.I. Pustovitch and A.V. Timofeyev for discussing the results. Orig. art. has: 53 formulas and 1 figure. 47,55

SUB CODE: 20

SUITE DATE: 04Feb65/

ORIG. REF: 004

OTH REF: 000

H.W.

2/2

Card

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